CLAIMS

1-55. (Canceled)

56. (Currently amended) A method of treating a central nervous system (CNS) lymphoma comprising the step of administering to a subject diagnosed with said CNS lymphoma a therapeutically effective amount of an unlabeled anti-CD20 antibody or fragment thereof and wherein the anti-CD20 antibody is administered intrathecally or intraventricularly, whereby levels of the anti-CD20 antibody are greater in cerebrospinal fluid (CSF) than in serum.

57. (Previously presented) The method of claim 56, wherein the CNS lymphoma is selected from the group consisting of: primary CNS lymphoma (PCNSL), leptomeningeal metastases (LM), or Hodgkin's disease with CNS involvement.

58. (Previously presented) The method of claim 57, wherein the CNS lymphoma is LM and wherein the anti-CD20 antibody or fragment thereof is administered in combination with cytarabine and thiotepa or methotrexate and ^{111}In-diethylenetriamine pentaacetic acid.

59. (Previously presented) The method of claim 56, wherein the anti-CD20 antibody fragment is selected from the group consisting of Fab, Fab' and $F(ab')_2$.

60. (Previously presented) The method of claim 56, wherein the anti-CD20 antibody is a human antibody, a humanized antibody, a bispecific antibody, or a chimeric antibody.

61. (Canceled)

62. (Previously presented) The method of claim 56, wherein growth of a CNS lymphoma is reduced.

63. (Previously presented) The method of claim 56, wherein the anti-CD20 antibody or fragment comprises human constant regions.

64. (Previously presented) The method of claim 56, wherein the anti-CD20 antibody or fragment comprises the antigen binding region of rituximab.

65. (Previously presented) The method of claim 56, wherein the anti-CD20 antibody or fragment comprises the complementarity determining regions of rituximab.

66. (Previously presented) The method of claim 65, wherein the anti-CD20 antibody or fragment comprises the heavy chain variable region and the light chain variable region of rituximab.

67. (Previously presented) The method of claim 66, wherein the anti-CD20 antibody is rituximab.

68. (Previously presented) The method of claim 56, wherein the anti-CD20 antibody is conjugated to a toxin, drug, or enzyme.

69. (Previously presented) A method of treating a central nervous system (CNS) lymphoma comprising the step of administering to a subject diagnosed with said CNS lymphoma a therapeutically effective amount of a radiolabeled anti-CD20 antibody or fragment thereof, wherein the anti-CD20 antibody is administered intrathecally or intraventricularly.

70. (Previously presented) The method of claim 69, wherein the isotope is selected from the group consisting of ^{211}At, ^{212}Bi, ^{67}Cu, ^{123}I, ^{131}I, ^{111}In, ^{32}P, ^{212}Pb, ^{186}Rh, ^{188}Re, ^{153}Sm, ^{99m}Tc, and ^{90}Y.

71. (Previously presented) The method of claim 67, wherein the rituximab antibody is conjugated to a toxin, drug, or enzyme.

72. (Previously presented) The method of claim 67, wherein the rituximab antibody is radiolabeled.

73. (Previously presented) The method of claim 72, wherein the isotope is selected from the group consisting of ^{211}At, ^{212}Bi, ^{67}Cu, ^{123}I, ^{131}I, ^{111}In, ^{32}P, ^{212}Pb, ^{186}Rh, ^{188}Re, ^{153}Sm, ^{99m}Tc, and ^{90}Y.

74. (Previously presented) The method of claim 73, wherein the isotope is ^{90}Y.